

WHAT IS CLAIMED IS:

1. A high pressure processing method for processing a processing object under a high pressure, comprising the steps of:
bringing a high pressure fluid into collision with a surface of a processing object placed in a high pressure processing chamber; and
distributing the high pressure fluid along the surface of the processing object in an outward direction beyond the processing object.
2. The high pressure processing method as defined in claim 1, wherein the high pressure fluid is a supercritical or subcritical fluid.
3. The high pressure processing method as defined in claim 1, wherein the processing object is rotated about an axis orthogonal to the surface of the processing object, to allow the high pressure fluid brought into collision with the surface of the processing object to be distributed outward along the surface of the processing object.
4. The high pressure processing method as defined in claim 1, wherein the high pressure fluid is dispersed, and the dispersed high pressure fluid is brought into collision with the surface of the processing object.
5. The high pressure processing method as defined in claim 1, wherein the processing object is arranged in the high pressure processing chamber in such a manner that the surface of the processing object is faced upward, wherein the high pressure fluid is introduced from an upward position and in an approximately perpendicular direction relative to the surface of the processing object, and then brought into collision with the surface of the processing object.
6. A high pressure processing method comprising the steps of:

placing a processing object in a high pressure processing chamber;

introducing a high pressure fluid into the high pressure processing chamber, and setting the high pressure processing chamber to a predetermined temperature and pressure;

bringing the high pressure fluid into collision with the surface of the processing object, distributing the high pressure fluid along the surface of the processing object in an outward direction beyond the processing object, and discharging the high pressure fluid outside the high pressure processing chamber, while maintaining the pressure of the high pressure processing chamber;

reducing the pressure of the high pressure processing chamber to the atmospheric pressure; and

taking the processing object out of the high pressure processing chamber.

7. A high pressure processing apparatus for supplying a high pressure fluid to a processing object to apply a high pressure processing to the processing object, the high pressure processing apparatus comprising:

a high pressure chamber adapted to contain the processing object therein;

a fluid supplier for supplying the high pressure fluid toward the surface of the processing object in the high pressure chamber; and

a fluid discharger for allowing the high pressure fluid supplied from the fluid supplier to the surface of the processing object, to be distributed outward along the surface of the processing object, and discharged outside the high pressure chamber.

8. The high pressure processing apparatus as defined in claim 7, wherein the fluid supplier is adapted to supply a supercritical or subcritical fluid as the high pressure fluid to the processing object.

9. The high pressure processing apparatus as defined in claim 7, wherein the fluid supplier includes a fluid introduction passage provided in the wall of the high pressure container at a position opposed to the surface of the processing object to supply the high pressure fluid to the processing object, and the fluid discharger includes a fluid discharge passage provided in the wall of the high pressure container at an outward position relative to the processing object and approximately parallel to the surface of the processing object, to discharge the high pressure fluid outside the high pressure container.

10. The high pressure processing apparatus as defined in claim 7, further comprising a rotating device for rotating the processing object.

11. The high pressure processing apparatus as defined in claim 7, wherein the fluid supplier includes a fluid dispersion mechanism for dispersing the flow of the high pressure fluid to be supplied toward the surface of the processing object.

12. The high pressure processing apparatus as defined in claim 11, wherein the fluid dispersion mechanism includes a closure plate disposed in opposed relation to the surface of the processing object, and a plurality of through holes formed in the closure plate.

13. The high pressure processing apparatus as defined in claim 11, wherein the plurality of through holes are formed concentrically with respect to the center of the surface of the processing object, wherein the respective diameters of the through holes are arranged such that the high pressure fluid passes through the through holes at approximately the same flow rate, and the distance between the circumferentially adjacent through holes is arranged such that it is reduced in the region of the closure plate opposed to the radially inward region of the surface of the processing object, more than in the region of the closure plate opposed to the

peripheral region of the surface of the processing object.

14. The high pressure processing apparatus as defined in claim 11, wherein the fluid dispersion mechanism includes a porous member disposed in opposed relation to the surface of the processing object

15. The high pressure processing apparatus as defined in claim 10, wherein the fluid supplier includes a fluid dispersion mechanism for dispersing the flow of the high pressure fluid to be supplied toward the surface of the processing object, the fluid dispersion mechanism includes a closure plate disposed in opposed relation to the surface of the processing object, and a plurality of through holes formed in the closure plate, wherein at least a part of the through holes is inclined relative to a direction orthogonal to the surface of the processing object, in a direction opposite to the rotation direction of the processing object rotated by the rotating device.

16. The high pressure processing apparatus as defined in claim 9, wherein the fluid discharge passage provided in the wall of the high pressure chamber at an outward position relative to the processing object and approximately parallel to the surface of the processing object is disposed in opposed relation to the peripheral edge of the processing object.

17. The high pressure processing apparatus as defined in claim 9, wherein the fluid introduction passage is provided in the wall of the high pressure chamber at a position opposed to the center of the surface of the processing object, wherein the wall of the high pressure chamber opposed to the surface of the processing object has a trumpet-shaped surface getting closer to the surface of the processing object in a direction oriented outward from the center of the surface of the processing object.

18. The high pressure processing apparatus as defined in claim 17, wherein the trumpet-shaped wall surface includes a hyperbolic surface.

19. The high pressure processing apparatus as defined in claim 17, wherein the trumpet-shaped wall surface is formed such that the distance from the center of the surface of the processing object along the surface of the processing object is approximately in inverse proportion to the distance between the surface of the processing object and the trumpet-shaped wall surface.